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AUTHOR Greene, John F.; Zirkel, Perry Alan
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ABSTRACT

The increasing emphasis on the affective domain in the teaching-learning situation has not produced a significant body of research on the development of self concept among Spanish-speaking--particularly Puerto Rican--students. This study investigated the relationship of the self-concept of Puerto Rican pupils with achievement, IQ, ethnic group mixture, and teacher ethnicity. The subject population comprised 333 Spanish-speaking students in 29 bilingual and control classes, grades one to three, in three Connecticut cities. The subjects were selected so as to be representative of Spanish-speaking majority classes taught by Spanish-speaking as well as Anglo teachers in schools with varying but significant numbers of Spanish-speaking students. Self-concept was measured via teacher reports on a standard instrument. The children were also tested for academic achievement and nonverbal intelligence. The results of a correlational analysis indicated that self-concept was significantly related to achievement in English and Spanish, as well as to teacher ratings of aural ability in both languages, although self-concept was not significantly related to IQ. However, the relationship between self-concept and academic achievement is demonstrated to be complex and circular. (Author/JM)

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Academic Factors Relating to the Self-Concept of Puerto Rican Pupils

John F. Greene
University of Bridgeport

Perry Alan Zirkel
University of Connecticut

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John F. Greene
University of Bridgeport

Perry Alan Zirkel
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The increasing emphasis on the affective domain in the teaching-learning situation is reflected in the growing body of research concerning the self-concept of students. In her landmark review of self-concept research, Wylie (1961) reported a "bewildering array of hypotheses, measuring instruments, and research designs (p.2)." However, she didn't cite any self-concept studies concerned with ethnic minority students.

A more recent review of the research (Zirkel, 1971) revealed a growing number of such studies involving ethnic group membership and mixture. Several studies during the intervening decade, for example, found self-concept to be significantly related to academic achievement for black as well as white students (Brookover & Thomas, 1964; Campbell, 1965; Caplin, 1968; Coleman et al., 1966; Epps, 1969; Frerichs; 1970; Lucas, 1966). Gustafson & Owens (1971) found similar results for Mexican- and Anglo-American students.

However, the body of research relating to the self-concept of Spanish-speaking students in general and Puerto Rican pupils in particular is still relatively scant and inconclusive. The Coleman Report (1966) was the only such study examining the self-concept of Puerto Rican children. Despite its large sample of subjects, the Coleman Report based its findings on only three items of a much more comprehensive instrument and only analyzed the relationship between academic achievement and self-concept for the overall sample and not the specific ethnic subsamples.

In a more recent study involving the self-concept of Puerto Rican pupils, Moses, Zirkel & Greene (in press) found somewhat differential results according to the type of instrument used. Testing with a self-report instrument (viz.,

the Coopersmith Self-Esteem Inventory) revealed the mean self-concept of Puerto Rican pupils to be significantly below that of both their white and black counterparts, while the results of a teacher-report instrument (viz., the McDaniel Inferred Self-Concept Scale) for the same sample of subjects revealed no such difference. Differences based on the proportion (majority v. minority) of each ethnic group in school were revealed to be not significant, although the mean self-concept of Puerto Rican children was higher when they were in the majority rather than the minority in school, according to both instruments. In their discussion, the authors suggested that the differential results regarding the relationship of self-concept with ethnic group membership may have been attributable to a defense mechanism in teachers militating against being identified with adverse ethnic discrimination in their ratings. They may have tended to inflate the ratings of Puerto Rican children in particular so as to appear not lacking in ethnic, linquistic, and cultural understanding vis-à-vis these pupils.

In the light of the relatively scant and inconclusive research in this area, the purpose of this study is to explore the relationship of the self-concept of Puerto Rican pupils with achievement, IQ, ethnic group mixture, and teacher ethnicity.

Method

The subjects of the study consisted of 333 Spanish-speaking* students in 29 bilingual and control classes, grades 1-3, in 3 Connecticut cities. The subjects were selected so as to be representative of Spanish-speaking majority classes taught by Spanish-speaking* as well as Anglo teachers in schools with varying but significant numbers of Spanish-speaking students. The proportion of Spanish-speaking students in the schools ranged from 18 to 73 per cent. All subjects fell into

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* The generic term "Spanish-speaking" is used for consistency and accuracy to refer to both students and teachers who had Spanish as their native language, but with the overriding realization that well over 90 per cent of the Spanish-speaking teachers and students in this study were Puerto Rican. Analysis of more specific categories of ethnic group background was not practicable because of insufficient numbers of such students and teachers.

categories 6 and 7 of Warner's (1949) revised scale, according to occupation of the head of the household.

The McDaniel Inferred Self-Concept Scale (MISCS) was used as a measure of self-concept. This instrument consists of 30 statements about the pupil's behavior which the observer (i.e., teacher, in this case) rates on a 1 (never) to 5 (always) scale. The resulting scores, which include reversals to prevent response set, can be thought of as points on a continuum between 1 and 5, with 1 representing a socially undesirable (or negative) and 5 representing a socially desirable (or positive) self-concept. McDaniel (1967) developed the instrument for "assessing the self-concept of the low-income culturally different child in a school setting (p.1)." McDaniel reported a test-retest reliability of .66 over a 6-month period for 180 children in grades 1-6. This instrument was selected rather than a self-report instrument so as to avoid such possibly intervening pupil factors as age, language, and culture and to examine the possibly intervening factor of teacher ethnicity.

The teachers were asked to fill out a MISCS for each of their pupils being tested in conjunction with the pre-testing phase of the evaluation of a billingual program one month after the start of the school year. The teachers were also asked to rate the same pupils on a 1 to 5 scale with reference to the children's aural abilities in English and, when possible, in Spanish. The children were concurrently administered the Goodenough-Harris Draw-A-Man Test (DAM) as a nonverbal measure of IQ and the Inter-American Test of General Abilities (TOGA), levels I and II in alternate Spanish and English forms, as a measure of academic achievement. The DAM was selected in line with the limited age and language abilities of the students. Directions were given in both languages. TOGA was selected because it offered the added dimension of a parallel measure in Spanish of the three areas of the test: viz., aural language, numerical, and nonverbal abilities.

The resulting data was treated by correlation analysis and analysis of

variance to explore the relationship between self-concept and such academic factors as achievement, IQ, and ethnicity.

Results

The correlation coefficients for the total sample (n = 333) between self-concept (MISCS) and IQ (DAM), academic achievement (TOGA total and selected subtests in each language), and teacher ratings of the pupils' aural language ability in English are given in Table I. The correlation coefficient given for self-concept and teacher ratings of pupils' language abilities in Spanish was based on a smaller number of subjects, as only those teachers who were Spanish-speaking rated the students with regard to Spanish. English as a Second Language teachers rated the students in the classes of the Spanish-speaking teachers with regard to aural English proficiency.

TABLE I
Correlation Coefficients between Self-Concept and Various Scholastic Factors (n = 333)

DAM	TOGA: ENGLISH			RATING: ENG	TOGA: SPANISH			RATING: SP
IQ	Total	Aural	NonV	Aural	Total	Aural	NonV	Aural
.10	.31**	.26**	.32**	.32**	.30**	.20**	.28**	.49** n = 243

**p < .01

The correlation coefficients between self-concept and all of the scholastic variables listed in Table 1, with the exception of IQ, yielded significance beyond the .01 level.

Differences between correlation coefficients involving Spanish v. English and verbal v. nonverbal abilities were generated to explore the effect of a possible language factor. Moreover, differences between the correlation coefficients involving teacher rating v. test results of aural ability in each language were examined. The significance of these differences is reported in Table 2.

TABLE 2
Differences between Selected Correlation Coefficients

Self-Concept (SC) with: x	y	$r_{x,sc}$	$r_{y,sc}$	$r_{x,y}$	df	t	p
Eng. TOGA Tot.	Sp. TOGA Tot	.31	.30	.79	330	< 1	ns
Eng.TOGA Aural	Eng.TOGA NonV	.26	.32	.54	330	1.0	ns
Eng.TOGA Aural	Eng.RATING Aural	.26	.32	.51	330	< 1	ns
Sp. TOGA Aural	Sp. TOGA NonV	.20	.28	.46	330	1.24	ns
Sp. TOGA Aural	Sp. RATING Aural	.20	.49	.25	240	4.29	< .001

Only the difference between the correlation coefficient of self-concept with teacher rating of pupil's aural ability in Spanish and that of self-concept with test score of pupil's aural ability in Spanish yielded significance.

The means and standard deviations of the MISCS are given in Table 3 according to ethnic group proportion (majority v. minority) of the Spanish-speaking pupils in school and the ethnic group background (Spanish-speaking v. non-Spanish-speaking) of the teacher in class.

TABLE 3
Means and Standard Deviations of the MISCS
by Pupil Proportion and Teacher Ethnicity

PUPIL PROPORTION	TEACHER ETHNICITY		
	Spanish-Speaking	Non-Spanish-Speaking	
Spanish-speaking Majority	3.73 (.573) n=66	4.11 (.617) n=67	3.92
Spanish-speaking Minority	3.74 (.466) n=82	3.86 (.587) n=118	3.81
	3.73	3.95	

It can be seen from Table 3 that the pupils appeared to have a higher mean self-concept when in schools with a Spanish-speaking majority and when in classes with a non-Spanish-speaking teacher. Whether either of these differences or their interaction was significant is examined by analysis of variance in Table 4.

TABLE 4

ANOVA for MISCS Results

Source of Variation	df	Sum of Squares	Mean Square	F Ratio
Pupil Proportion	1	1	1	3.12 ns
Teacher Ethnicity	1	3.832	3.832	11.94**
Interaction	1	1.754	1.754	5.46*
Within	329	105.594	.321	
Total	332	112.126		

*p < .05
**p < .01

It can be seen from Table 4 that the ethnic group mixture of the pupils in school approached but did not attain significance, while the ethnic group membership of the teachers emerged as a significant factor AT the .01 level. Moreover, the interaction between the pupil proportion and teacher ethnicity factors yielded significance beyond the .05 level.

Discussion

The results of the correlation analysis indicated that self-concept was significantly ($p < .01$) related to achievement in English and Spanish as well as to teacher ratings of aural ability in both languages, but that self-concept was not significantly related to IQ. That self-concept was not found to be significantly related to IQ may have been due to differences in the instruments. How intelligence and self-concept are measured will intimately influence the results, particularly for culturally different, minority children. Burke (1968), for

example, found IQ to have a high positive relationship (r = .57) to the self-concept of children as measured by a self-report instrument, but to have a low negative relationship (r = -.04) to self-concept as measured by teacher ratings.

That the correlation coefficients between self-concept and academic achievement in English and Spanish were found to be both significant would seem to be in line with previous research involving other ethnic groups of students. That these coefficients were found to not be significantly different from each other may have been due to the inclusion of Spanish-speaking teachers who provided the opportunity for bilingual instruction. The presence of their perceptions may have accounted for the similar consistency of the results.

Although the relationship between self-concept and academic achievement was statistically significant, it would appear to be neither substantial in degree nor simple in direction. Although Coleman et al. (1966, p.320) concluded that self-concept was probably more a consequence than a cause of academic achievement, it would seem rather that the relationship is a complex and circular one.

The lack of a significant difference between the verbal and nonverbal subtest coefficients in both languages with self-concept as well as that between the total Spanish and English scores with self-concept would seem to discount the notion of an intervening language factor within the overall relationship. The significantly higher relationship between the Spanish-speaking teachers' ratings of the pupils' aural language ability and self-concept than that between the pupils' test score in the same area and self-concept may indicate that their perceptions of pupils' language behavior is being influenced by the perceptions of pupils' general classroom behavior. If this were so one would expect the relationship between pupils' language and classroom behavior to be low. Such was found to be the case (r = .25).

The majority-minority effect with regard to Spanish-speaking school population was similar in degree and direction to that found for Puerto Rican fifth

and sixth grade children in the Moses, Zirkel, & Greene study with both the same teacher-report as well as a self-report instrument. Thus the self-concept of Puerto Rican children seems to be higher, but not significantly higher, when they are in a majority rather than a minority school situation.

The significant teacher ethnicity factor may have reflected differential perceptions between Spanish-speaking and English-speaking teachers in rating the affective behavior of their Spanish-speaking students in otherwise comparable classes. If so, whether the significantly higher ratings of English-speaking teachers was due to different cultural frames of reference or to a differential reaction to the task is not clear. Whichever the explanation, English-speaking teachers tended to rate the Spanish-speaking children higher when they were in a majority in school whereas the Spanish-speaking teachers showed a significant lack of such a reaction, as indicated by the interaction effect.

This study was undertaken as a stimulation rather than a culmination of such research involving Puerto Rican children. The need for culturally consonant instruments and instruction for these and all our children is becoming all the more evident through such research. It is only hoped that the cries for cultural pluralism will awaken the American society and schools from the oppressive nightmare of "English-only" ethnocentrism to a day shining with equitable opportunities for all.

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